

ENVIRONMENTAL ASSESSMENT

MADISON COUNTY SUBDIVISION REGULATIONS ENVIRONMENTAL ASSESSMENT

Stone Ridge Views Subdivision

GENERAL

Stone Ridge Views Subdivision is a 201-acre site composed of two parcels. The parcels are described as the Southeast Quarter of Section 26, Township 4 South, Range 2 West and the remainder Tract 46A, Amended Plat of Lot 1, Wey's View Minor Subdivision located in the Northeast Quarter of Section 35, Township 4 South, Range 2 West of P.M.M, Madison County, Montana. The proposed subdivision is adjoining the southeast corner of the Elk Hills, Certificate of Survey No. 411, an un-reviewed development consisting of 45 tracts of 20 acres or larger. South Meadow Creek Road runs along the south and west sides of the proposed subdivision. The parcels are currently being used for agricultural purposes, which include hay field and cattle grazing land.

As indicated on the preliminary plat, this project is currently planned for 18 residential lots of varying acreage. The smallest proposed residential lot is 4 acres and the largest is 20 acres. A platted building envelope has been located on every proposed lot. The building envelopes will either be 0.75 acre or 1 acre depending upon lot size. Building envelopes will be clustered around cul-de-sacs to maximize the amount of undeveloped land in the rear of each lot. In addition, 17.5 acres of private open space will be dedicated to the home owners' association. The open space will be composed of four tracts. These open spaces will be used for recreational purposes and maintained by the homeowners association. A wildlife corridor will be established on the northern most 36 acres of the Subdivision. This corridor will provide an adequate land area for Elk to migrate through the northern boundary of the subdivision.

Open Space D is located within a 100' construction setback. This open space will also at as a wildlife corridor for wildlife accessing the creek and preserve existing vegetation. Within the open spaces a trail network will be established for private use of residents. A total of 54 acres will be dedicated as open space or fall within a conservation easement. Such a large amount of open space and protected land is consistent and compatible with the Madison County Growth Policy. The development will create a desirable place to live, promoting public health and safety, and protecting wildlife of the surrounding area.

The proposed subdivision will have two points of access. The primary access will be off of South Meadow Creek Road on the east side of Wey's View Minor Subdivision. A secondary access will be on to Elk Hills Road. This second access will be a 14' gravel road maintained as a public road, but only used for emergency access. Stone Ridge View Drive will be a 26' wide

county gravel standard road. All other interior subdivision roads, Lookout Trail, Meadow Vista Drive and Willow View Way, will be 22 feet wide and built to Madison County gravel road standards.

The proposed project will be developed in two (2) phases (Refer to Overall Development Plan, Appendix H). The first phase will be the construction of Stone Ridge View Drive, the emergency access road and the fire fill site. The second phase will be the construction of Lookout Trail, Meadow Vista Drive, Willow View Way and the subdivision trails. Construction of residences on each lot will not occur until sanitation approval is obtained from the Montana Department of Environmental Quality and a septic permit is obtained from the Madison County Sanitarian.

EFFECT ON AGRICULTURE

Number of Acres in Production.

Currently, the 201 acre site is used for range land and hay production.

Productivity of the Land

As indicated in the NRCS Soils Report included in Appendix B, 90% of the property is either Nuley-Rock outcrop complex (NRCS Clasification #91) or Varney clay loam (#147). Nuley-Rock is not rated for crop production. The Varney clay loam is mildly productive and NRCS has applied the following production values to the soils classification: 3.69 tons/year/acre of Grass-Hay, 4.85 tons/year/acre of Alpha-Hay & 7.27 tons/year/acres of Pasture. Range production for both soil types is moderate, Nuley-Rock can produce 1140 lbs of vegetation/year/acre or Varney clay loam 1261 lbs/year/acres. NRCS does not classify either of the soils for crop production.

Whether or not the property is part of a viable farm unit.

Given the size of the property, the property is considered to be viable range land. The property however does not produce a great amount of vegetation per year. The subdivision will replace the agricultural use with residential use & open space. Residents will be allowed to graze horses on their property. However, given the current housing climate and the phasing proposed, much of the property will remain as range land for the coming years.

Agricultural operations in the general locality.

Properties to the North and East are currently large agricultural properties. The properties to the South and West are residential subdivisions.

Loss of Productive Agricultural Land

As with most developments in Madison County, the proposed subdivision will result in a loss of productive agricultural land. However, the proposed subdivision has been designed in a desirable cluster fashion to consolidate development. Road right-of-ways and building envelopes are laid out to cluster the home sites and minimize the amount of roads required.

The lots range in size from 4 acres to 20 acres in size. It should be assumed that the building envelopes will no longer be used for productive agricultural land; however residents could use the remaining acreage for productive agricultural land. The cluster development will reduce the impact and allow more land to be used for grazing. The property is adjacent to similar size parcels. 5 acre lots are located to the south and 20 acre tracts are located to the west. The proposed division of land will not result in a “patchwork” type of development.

EFFECT ON AGRICULTURAL WATER USER FACILITIES

Benefit of Sale

The sale of the lots within the subdivision will not benefit other agricultural operations directly. The purchase of the land by Scott and subsequently Stone Ridge Club, Inc. benefited Nelsen’s agricultural operations. Providing housing on this rocky land could prevent the need for developing more productive agricultural land in the county in the future.

Water Rights

Water rights will not be conveyed to the subdivision owners. The water right will remain the property of Stone Ridge Club, Inc., a corporation based in McAllister.

Irrigation rights

Irrigation rights will not be conveyed to the subdivision owners. The water right will remain the property of Stone Ridge Club, Inc., a corporation based in McAllister.

Upslope and Down Slope Irrigated

Both upslope and down slope properties are irrigated. The water right of the upslope and down slope users will be protected through a thoughtful subdivision layout and proper sizing of culverts.

General

There are three named ditches located on the property. The Mackel Ditches & Higbee Ditch (Tudor Ditch) are diverted from South Meadow Creek at a location west of the property boundary. The ditches flow from the west to the east and terminate east of the western property boundary. The third ditch is the Bonner Ditch. The Bonner Ditch sweeps through the northern portion of the property. This ditch originates from Leonard Creek.

The Mackel Ditches are composed of two primary ditches. These ditches run through the center of the SE1/4 of Section 26. In addition to the primary ditch several other laterals are noted on the Water Resources Survey. The primary ditch was field located. Laterals were located from an aerial photo. The Mackel Ditches have not been used in recent years, but should remain in working order and protected in the event their use is required in the future. A 30’ wide operation and maintenance easement is proposed around the Mackel Ditches. The only portion of this ditch that would be affected by the proposed development is at the intersection with Stone Ridge Road. A culvert will be installed at this location. The culvert

will be engineered and sized to convey an amount of water equal to or greater than the current ditch capacity.

The Higbee Ditch is located south of South of Meadow Creek. This ditch flows southeasterly across proposed Lots 1 and 2 into Section 36, Township 4 S., R. 2 W. The Higbee Ditch is still used for flood irrigation. The proposed road will cross the ditch just west of the existing two track road crossing. A culvert will be engineered and sized to convey an amount of water equal to or greater than the current of Higbee ditch capacity

The Bonner Ditch creates a half moon shape from the northwest corner of the property to the northeast portion of the property. This ditch cuts through proposed lots 14, 15 and 16. The portion of the Bonner Ditch within the boundaries of the subdivision is entirely located within a proposed conservation easement. In no way will this ditch be affected by the development of the subdivision. A 30' Operation and Maintenance easement is proposed for this ditch. Ditch users will have a right to maintain the ditch as required even though this ditch will be within a conservation easement.

The overall effect of the subdivision will be negligible with respect to ditch interference. The current subdivision layout and road design limits the number of ditch crossings and interference between home sites and irrigation easements. The number of ditch crossings were kept to a minimum through thoughtful road design. The property has existing water rights (Appendix I). The developer will retain and may use the water rights that come with the land for irrigation of open space and/or augmentation as required by the Beneficial Water Use permit process.

EFFECT ON NATURAL ENVIRONMENT

Surface Water

Description

The site is situated within the Madison River drainage system, approximately 5 miles west of the confluence of the North Meadow Creek and South Meadow Creek at Lake Ennis (Reservoir). A deep channel has been carved through the property by South Meadow Creek. This channel is more than adequate to contain runoff from a 100-year storm event. A floodplain delineation and cross-section study is shown in Appendix J. The irrigation ditches supplied by South Meadow Creek that pass through the property flow infrequently and should not be cause for concern. Besides South Meadow Creek and the irrigation ditches, there are no streams, creeks, or bodies of surface water on or near the property.

Several culverts will be required to be installed at roads, driveway and trail crossings at point of intersections with the existing irrigation ditches. These culverts will be sized to carry equal or a greater flow than the existing ditches.

The proposed subdivision drainage plan utilizes retention ponds to fully retain additional flows generated by the development as required by the Montana Department of Environmental Quality (MDEQ). These structures will capture the majority of site contaminants and all water carried debris. These ponds will capture stormwater and discharge precipitated stormwater into South Meadow Creek at a predevelopment level. The storm water pond will settle out sediment and debris. A storm water maintenance plan has been included with the draft homeowners' association covenants and will be incorporated into the final covenants.

Groundwater

Depth

The Montana Bureau of Mines and Geology was contacted for well log reports. Monitoring well data within section 26 & 35, Township 4 South, Range 2 West shows that the groundwater elevation on average is 73 feet below the ground surface. The minimum groundwater elevation is 18 feet below the ground surface and the maximum is 230 feet below. Refer to Appendix B for well logs.

Steps to Avoid Degradation

Impact to the groundwater in the vicinity will be minimal as sewage will be disposed of via approved subsurface wastewater treatment systems. Proposed wastewater treatment systems will be required to undergo sanitation review in by both the Montana Department of Environmental Quality (MDEQ) and Madison County Sanitarian. Preliminary Non-Degradation analysis calculations show the commutative effects of nitrate and phosphorus discharged from the drainfields will be below the allowable levels permitted by the MDEQ. Refer to Appendix C for a sanitation overview and non-degradation Analysis.

Water augmentation (the process of reintroducing surface water back into the aquifer) will occur in some degree for domestic landscape watering and infiltration. Such augmentation offsets the consumptive uses (approx. 15% irrigation water and 100% domestic water) and results in no adverse impact to nearby groundwater wells. Through this process, the net impact on groundwater consumption is negligible as depletion is equal to the volume of water reintroduced into the aquifer.

Stormwater

The natural slope of the subdivision directs runoff primarily in a southeasterly direction to South Meadow Creek. This will not change with the development of the Stone Ridge Views Subdivision. Additional runoff created from impervious surfaces (roofs, driveways and roads) will be retained via bio-swales and retention ponds. A bio-swale is a long narrow depression in the ground which is seeded with local plants and grasses. An example of a bioswale would be a vegetated road side ditch. Runoff is retained in the swales to allow the stormwater to infiltrate into the ground rather than sheet flow to nearest surface water.

Michael Vaughn and Julie Cunningham wildlife biologists of Montana Fish Wildlife and Parks (MTFWP) stated in an April 14, 2009 letter (Appendix D), "In general you should plan to avoid any activity (road building and associated infrastructure, house construction, utility placement) near surface waters that might destabilize existing channel configurations. You will want to avoid disturbing riparian vegetation.

In addition, the MTFWP is concerned about waste, nutrients and/or sediment from the horse pastures entering South Meadow creek. To mitigate this possible source of contamination a bio swale will be constructed on the downhill side of any horse pasture. This swale will flow into a retention pond. Organics will be processed in the swale and pond and not directly enter South Meadow Creek.

The developer's construction plans will include actions to reduce or mitigate sediment delivery, and to prevent discharge of petroleum products or other harmful substances into nearby streams, ditches or to lands capable of delivering these substances to nearby waterways.

Where natural grade directs runoff to the front of lots, road side ditches or detention ponds will retain additional post-development discharge. At locations where natural grade directs runoff to the rear of the lot a bio-swale or on lot retention pond will retain the stormwater runoff. Additional runoff created by roads and parking lots will be collected in retention ponds or detention ponds. All swales and ponds will be designed for a 2-year, 24 hour storm event as required in MDEQ Circular 8, "Montana Standards for Subdivision Storm Drainage".

All additional discharge will be retained for infiltration back into the groundwater and/or discharged at a controlled rate at the current pre-development runoff rate into South Meadow Creek.

Water quality will be protected through the use of roadside ditches and retention/detention ponds. These systems are designed to decrease water velocity, allow for the precipitation of sediment and heavy metals and the biological use of other chemicals (nitrogen and phosphates) by plants. Periodic maintenance will be contracted by the Home Owners Association to ensure that the water quality retention ponds and road side ditches continue to function as intended. A copy of the proposed storm water maintenance plan is attached in Appendix F.

Geology - Soils - Slopes

Geologic Hazards

The proposed site is situated between the Madison and Tobacco Root Mountain Ranges. The river valley is primarily made up of Aluvium, but to the west in the Elk Hills the

geology is varied. The proposed subdivision consists of strips of differing geology. From north to south there is Ahga – Horneblende-plagioclase gneiss and amphibolite, Aqfg - Quartzofeldspathic gneiss, Qc – Colluvium, Qal – Alluvium of modern channels and floodplains, and Qgr – Gravel deposits. Refer to Appendix B for geologic study data.

The property is located within the Northern Intermountain Seismic Belt. According to the State of Montana Multi-Hazard Mitigation Plan and Statewide Assessment (October 2004), the abovementioned source zone could produce a magnitude 6 earthquake or larger on average once in a 500 year period. However, beyond seismicity, there are no other geological hazards that would prevent development.

Protective Measures

Structures located within this subdivision will be required to be designed for seismic activity.

Unusual Features

There several unique Nuley-Rock outcroppings located on the property. These rock formations provide character to the land and will be protected by locating building envelopes away from these rocks.

Soils Map

Approximately 52% of the site is composed of Nuley-Rock outcrop complex (NRCS classification #91) and approximately 41% of the site is Varney clay loam (#147). The remaining 7% of the property is composed of Beaverell cobbly loam (#17) and Cryaquolis (#38). Refer to Appendix B for USDA Natural Resources Conservation Service (NRCS) soils maps, properties and information for all the soil types, and an SCS aerial photograph.

Mineral Rights of Owner

A preliminary search of property transfer deeds identified no specific transfer of mineral rights to the current owners. Any mineral rights which exist will remain the property of the Stone Ridge Club, Inc.

Vegetation

Typical Growth

The vegetation on the site has a growing season of 90-150 days, and the area receives annual precipitation of approximately 12.04 inches per year (Western Regional Climate Center).

The bulk of the vegetation consists of farmed hay and sage brush. A Noxious Weed Management Plan for the subdivision has been completed and submitted to the Madison County Weed Board. A receipt for this plan is included in Appendix G. This plan identifies the species and quantity of weeds present, and outlines control methods. There are no known critical plant communities found within the proposed construction areas. Consequently, the proposed development will not affect critical plant communities.

Protective Measures

The Madison County Weed Board will review the Noxious Weed Management Plan will make recommendations for the control of Noxious Weeds. A Memorandum of Understanding will be signed by the property owner to ensure that measures are taken to control any onsite weeds, and to provide preventive measures prior to filing final plat.

Air Quality

The proposed subdivision will have a minimal effect on air quality. Dust stirred up by vehicle interior and exterior roads can affect air quality. Low traffic volumes and low speeds will minimize dust created by the new roads. If dust becomes a significant problem water trucks can spray down roads during the hot summer months or magnesium chloride can be applied to roads as a longer term solution.

Natural Landscape

The property is on an attractive hillside. It is bordered by a 45 tract development to the west and several minor subdivisions to the south. Agricultural land is located to the north and east. Lots and building envelopes have been established in locations to reduce the visibility from existing homes located in Elk Hills Subdivision and Wey's View Subdivision. Following the "Code of the West", building envelopes have not been located on ridge lines. The visual impact to adjacent communities has been minimized. Some of the home sites will be visible from South Meadow Creek Road.

Riparian areas, Wetlands Flood Prone Areas

Observation of wetlands and riparian areas was conducted by David Grigsby. The only wetlands and riparian vegetation that were observed were located along South Meadow Creek. According to the Army Corps of Engineers Wetlands Delineation Manual, wetlands are technically defined as areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas. The interaction of hydrology, vegetation, and soil results in the development of parameters unique to wetlands. For delineation purposes, positive indicators of hydrophytic vegetation, hydric soils, and wetland hydrology must all be present before an area is considered a wetland environment.

Michael Vaughn and Julie Cunningham wildlife biologists of MFWP stated in an April 14, 2009 letter (Appendix D), "In general you should plan to avoid any activity (road building and associated infrastructure, house construction, utility placement) near surface waters that might destabilize existing channel configurations. You will want to avoid disturbing riparian vegetation.

The proposed subdivision is a wetland friendly design which will minimize the destruction of wetlands. A 35 foot or greater conservation easement has been established along South

Meadow Creek. The MFWP has suggested a 35' buffer zone between the stream and development. The buffer proposed for this subdivision is from the creek to just part the top of the bank adjacent to the creek. The proposed trail which runs along the north side of the creek is situated on top of the creek bank. The location of the trail will avoid the steep slopes of the creek bank which will prevent erosions from foot and hoof traffic on the steep banks of the creek. Furthermore locating the trail on top of the river bank will prevent the destruction of riparian vegetation below. The proposed bridge has been located at the point where the bridge span will be the shortest this will reduce the destruction of riparian vegetation. The existing 12' bridge will remain in place as a foot bridge and the surround land will be allowed to return to its natural state.

Natural topography

The proposed site consists of undulating topography. The site ranges from relatively flat to moderately steep with slopes ranging between 3%, and 18%. The average slope is approximately 12 percent in a southeasterly direction. Minor cutting and filling will be associated with the construction of the roads within the subdivision. Cuts or fills exceeding 3 feet are not generally proposed except for placing of compacted fill adjacent to proposed bridge abutments.

Slope instability should not be an issue on this site. Only a small portion of the property have slopes exceeds 15%, but no portion of the property exceeds 20% slope. The proposed road layout does not to exceeding 10% grade. All septic systems will be located where slopes are 15% or less. A geotechnical engineering foundation report will be required on slopes which exceed 15%, and this is noted on the plat.

Open Landscape, Scenic Beauty

The proposed subdivision is design as a clustered development which will preserve large open areas of land. Home sites are located around cul-de-sacs. The proposed building envelopes are not located on ridges tops within the subdivision, which will preserve much of adjacent property owner's views. Homes will be finished with natural exterior colors to blend into the existing landscape (see Design Guidelines, Appendix E). Interior roads were planned to affect the natural terrain as little as possible with grades and alignment designed to reduce cuts and fills. All excavated areas will be reseeded and returned to natural vegetation of the area. Utilities are anticipated to be underground with boxes and structures positioned out of sight as much as possible or designed to fit into the character of the land. These precautions will reduce the impact to the natural beauty of the area. In particular views of the Madison Mountain Range will be preserved.

EFFECT ON WILDLIFE AND WILDLIFE HABITAT

Wildlife

The east foothills of the Tobacco Root Mountain Range provide excellent habitat for large and small game. Robert Brannon, a wildlife biologist for the Montana Fish Wildlife and

Parks, stated in a November 14, 2008 letter, “the area around the (proposed) subdivision serves as year round range for mule deer and white tail deer, primarily. Pronghorn antelope may use the area as do many small game and non-game species, upland bird species such as Hungarian partridge and potentially sage grouse and some waterfowl and raptor species. The area also serves as seasonal range for elk”

Elk Migration has been cited as a concern, by the developer, adjacent land owners and the Montana Department of Fish Wildlife and Parks (MFWP). Elk have been observed passing through the Elk Hill Subdivision, on to the northern edge of the proposed subdivision to the land to the east. The proposed layout has allotted a 35-acre swath of land to be protected with a conservation easement to allow for Elk to pass freely across the property. This conservation corridor will protect elk migration for the foreseeable future.

Pronghorn antelope frequent the property and MFWP state that, “Pronghorn migratory routes include this property”. To accommodate for the herd migration on the north side of the property cluster developments have been pulled from the northern portion of the property to allow an open corridor where wild game can pass freely through.

No animals listed under the Animal Species of Special Concern (Montana Natural Heritage Program, Helena (2003)) were observed or are known to occupy this property.

As advised by the MFWP, a conservation easement will be established from the edge of the Creek. This buffer strip will prevent destruction of riparian vegetation, prevent bank destabilization from horses and allow for wildlife to pass through the creek corridor. The MFWP suggest a 35’ buffer. The conservation easement proposed is approximately 100 feet wide on either side of the creek.

Controlling Family Pets.

Covenants will be in place requiring the homeowners to confine pets by such means as fenced in yards, or tethers. Also, limitations to the number of pets allowed will be outlined in the covenants. (Appendix F)

EFFECT ON LOCAL SERVICES

Effect on Community Water and Sewer

The proposed subdivision will not connect to community sewer or water systems. Each lot will be required to install a private well and wastewater treatment system approved by the Madison County sanitarian and the Montana Department of Environmental Quality.

Traffic

Current Traffic Volume

A traffic count was conducted at the end of South Meadow Creek Road from August 18, 2009 to August 24, 2009. Jim Hart, Board of Commissioners stated in an August 25, 2009 email that over the course of 6.5 days, 1700 vehicles used South Meadow Creek Road. This averages to 261 trips per day (tpd) that occur on South Meadow Creek Road.

Additional Traffic Volume

Per Madison County design standards the Institute of Transportation Engineers (ITE), Trip Generation Manual was used to determine predicted traffic volumes. The equation for "Single Family Detached Housing <300 Units" was used to determine the Average Vehicle End Trips ($\text{Ln}(T) = 0.921\text{Ln}(\# \text{ of Lot}) + 2.698$). 212 tpd can be expected for an 18 lot year-round residential subdivision. However, this estimate is much higher than the actual number of trips per day that will be generated upon full build out of the subdivision.

212 trips is a high estimate due to several characteristics of land ownership in the area. The demographic makeup of similar tracts of land adjacent to the subdivision support this hypothesis. Many lots of Stone Ridge Views Subdivision will inevitably be purchased as a vacation or investment properties. The Stone Ridge Views Subdivision will likely have a similar ownership makeup as Elk Hills. It would be anticipated that the lots owned for seasonal use may remain that way for the foreseeable future (10 to 20 years). Beyond this period it would be very difficult to ascertain ownership. Elk Hill Tracts are now almost 30 years old still only 25% of the properties have mailing addresses in McAllister.

A more realistic way of estimating the number of trips per day per dwelling would be to divide the observed trips per day by the number of dwelling units accessing South Meadow Creek Road. Aerial photography was used to estimate the number of dwelling units accessing South Meadow Creek Road. An estimated 120 dwelling units were located on roads that connect to South Meadow Creek Road. Based on the traffic count and the number of dwelling units, the average trips per day per dwelling is 2.25.

Based on a trip generation of 2.25 tpd per dwelling unit the Stoneridge view subdivision would increase road usage by 41 tpd. This would be a 16% increase in the current traffic volume. A jump from 261 trips per day to 202 per day would be noticeable if it occurred overnight, however given the current state of the economy, housing starts are anticipated to be slow. Any increase in the traffic on South Meadow Creek Road will be a gradual and imperceptible to South Meadow Creek Road Residents.

Road & Bridge

A 16' wide 30 ton bridge is proposed to access the subdivision property. This bridge will be sufficient to handle regular subdivision traffic as well as have the capacity to handle emergency vehicle traffic. Elk Hills Bridge will be used only in the event of an emergency

and will be closed to the Stone Ridge View's residents. Likewise the residents of Elk Hills could use the Stone Ridge View bridge if there was ever a temporary closure of the Elk Hills bridge.

Emergency Services

Law Enforcement

The proposed subdivision is outside of any city limits, so law enforcement will be provided by the Madison County Sheriff Department. The Sheriff's Department indicates it presently can provide adequate police services, but indicated that as the county continues to grow, it may not be able to meet the needs of the citizens. Refer to Appendix D for correspondence.

Medical Services

The Ennis Volunteer Ambulance Service has indicated it could respond to Medical Emergencies, however, response times may be limited by volunteer availability. The Madison Clinic offers medical services on an appointment basis from 8am-5pm. Emergency services are available at the clinic 24 hours day. However, if an emergency occur during non-regular hours (M-F, 8-5, subject to change) an on-call medical person will respond. Refer to Appendix D for correspondence.

Fire Protection

The Madison County Rural Fire Department (MCRFD) has indicated they are willing and able to respond to fire emergencies within the proposed subdivision. Fire Chief, Shawn Christensen, has a few requests to improve safety of the subdivision. Fire Chief Christensen will require a dry hydrant with a reservoir capable of delivering a minimum of 10,000 gallons of water to be installed prior to final plat approval. The signage in the subdivision will be required to have reflective numbers and letters for aid in identification of home addresses. Finally, a wildlands fire plan is required. The wildlands fire plan has been reviewed by the MVRFD and is included in Appendix E, within the HOA guidelines.

Response Times

Response times vary between emergency medical organizations. Madison County Emergency Management estimates the response time for fire and medical emergencies to be between 20-30 minutes. The Madison County Sheriff's office estimates that its' response time would be between 35 and 45 minutes depending upon the location of a deputy in the area, weather conditions, traffic and location of mobile unit at the time of a call. Refer to Appendix C for correspondence.

Personnel

No additional expenses will be incurred or will any immediate additional support be required by any of the providers except the Sheriff's Department. Refer to Appendix C for correspondence.

Accessibility of Service Systems and Facilities

Total Distances: the following distances from the proposed subdivision:

Fire Protection:

Madison Valley Rural Fire Dept.	1 mile
Fire Fill Site	Within Subdivision

Law Enforcement Protection:

Sheriff's Station - Virginia City	24 miles
Ennis Police Office – Ennis Town Hall	11 miles
Hospital Facilities – Madison Valley Clinic, Ennis	11 miles
Elementary School - Ennis Elementary	11 miles
High School - Ennis High School	11 miles

Schools

Available Facilities

The Ennis Public School Systems, District 52, will serve the proposed subdivision. Grade school children will attend Ennis Elementary School. Seventh and eighth grade students will attend the Ennis Middle School. Ninth through twelfth grade children will attend the Ennis High School. All three schools are located on the same grounds in the Town of Ennis. All schools are within 11 miles of the proposed subdivision.

Additional Enrollment

To estimate the additional enrollment in the schools caused by the creation of the proposed subdivision a percent of enrolled students was determined from local governmental figures. The current estimated population of Madison county for 2008 is 7,505 (*Table 1: Annual Estimated of the Resident Population for Counties of Montana: April 1, 2000 to July 1, 2008*, Population Division US Census). 938 residences of Madison County were enrolled in Madison County Schools (www.madison.mt.gov/departments/supe_%20schools/Enrollment0809.asp). An average of 12.5% of the population of Madison County enrolled in grades K – 12. Over the past 10 years the enrollment of students in Madison County schools has decreased by 15% and in the Ennis school enrollment has decrease 13%. It is interesting to note in the same time period the county population increased from 6851 residents in 2000 to 7,505 residents in 2008, a population increase of 10% (*Table 1: Annual Estimated of the Resident Population for Counties of Montana: April 1, 2000 to July 1, 2008*, Population Division US Census).

An average of 2.29 persons per lot (*Profile of General Demographic Characteristics: 2000*), would equate to 41 people living in the subdivision at full build out. Since 12.5% of the population is enrolled in school it can be assumed five additional students can be anticipated. This number of additional students is insignificant, as it would take a number of years to realize this amount. Only ½ of a student would have to be absorbed by each grade.

Taxation

Current Taxes

The proposed subdivision is currently contained in two parcels. According to the Madison County Treasurer's Office, the Southeast Quarter of Section 26, Tax ID #271112901, land assessment classifications is Grazing Land. The remainder Tract 46A, Amended Plat of Lot 1, Wey's View Minor Subdivision, Tax ID #27139401, has a land assessment classification of non-qualified agricultural land. Taxes for the listed parcels were \$80.66 and \$129.46 respectively.

Anticipated Taxes

The taxes paid per lot after final build-out is determined by the Department of Revenue. The amount of property taxes paid per lot is based on the property's value, which is multiplied by the mill levy. The mill levy varies and is dependant on the taxing jurisdiction, city and county government, school district and other variables.

Formula provided by the Madison County Tax Assessors Office:

(Value) x (Tax Rate) = Taxable Value

(Taxable Value) x (Mill Levy) = General Property Tax

Tax Rate=2.93%

Mill Levy=337.07/1000=0.33707

In order to determine the projected tax revenue for the proposed subdivision the Madison County Department of Revenue was contacted. The following estimate is based on projected value of the 18 lots for the summer of 2010. This estimate was prepared by Arrow Real Estate in June of 2009. The total projected market value of the 18 Lots is \$4,090,000. The taxable value of the properties will total \$119,837. The average yearly taxes would be \$40,393.5/year based on the previously stated Tax Rate and Mill Levy.

Student Costs

According to Madison County Tax Levies for 2009 County Levies, 87.74 mills were allotted to the Ennis School District. One mill equals \$67,855.43, meaning county taxes provided \$5,953,635 to the Ennis School District. This includes funds to finance the education of the 190 students in Big Sky as well. According to "Enrollment for Madison Schools" Ennis had 351 students enrolled in 2008-2009 academic year. The total enrollment is 541 students.

The subdivision is expected to add five additional students to the Ennis School District. The average cost per student in the Ennis School District is \$11,005 (\$5,953,635 /541 students). Based on the average cost per student figure the five additional students anticipate to live in the subdivision would cost \$55,005. This figure is greatly inflated because much of the school budget is composed of fixed costs and will not increase due to additional students. The current school has adequate capacity to absorb the future students.

Resident Costs

According to Cathy Gustin, Madison County Finance, the total budget of the county is \$35,268,188, not including school funding. As of 2008 Madison County had 7,509 residents. The average cost of a County resident is \$4,697.

Affordable Housing

The proposed subdivision will not add to the County's affordable housing stock.

Utilities

Affected Utilities

A 10-foot utility easement is proposed to along the perimeter of the subdivision right-of-way. This will provide utility service to the front of each lot and along the proposed right-of-way. An illustrative plan has been submitted via email to Brian Schultz of Northwestern Energy. Telephone service will be provided by Qwest. These utilities are planned to be installed underground. The proposed location of the utilities will be coordinated with the respective utility companies. Refer to Appendix D for correspondence.

Solid Waste Disposal

Allied Waste Services has indicated that service to the area could be provided at an expense to the lot owners. One or more front load dumpsters could be provided within the grounds of the subdivision. These dumpsters would be required to be bear-proof containers. Residents could also drop off their garbage at a solid waste container site located in Ennis. This service is included as a portion of property taxes and no additional charge would be required of lot owners. Solid waste disposal providers and solid waste disposal sites are required to meet the requirements of the Montana Department of Environmental Quality for solid waste disposal.

EFFECTS ON PUBLIC HEALTH AND SAFETY

Well Logs

Well logs for near by wells demonstrate a clean and adequate water supply. Wells have not been drilled on site but the average local well yield is 39.74 gpm. The average well depth is around 73 feet, but water has been encountered as high as 18 feet and as low as 230 feet.

Natural Hazards

Few natural hazards are present. The proposed building sites are not within any known flood zone. Slope instability is not an issue because construction will not occur on steep slopes greater than 25% slope. Forest fires are a low risk due to the sparse tree coverage on site. Brush and grass fires are a potential risk, however this risk can be managed through fuel management. A fuel management buffer zone around home sites will be established to reduce damage to property. Refer to the Fire Protection Plan (Appendix E) and HOA Covenants (Appendix F). Adjacent properties may be utilized for agriculture, and a

statement in the covenants requires homeowners to acknowledge and be aware of agricultural activities.

Man-made Hazards

The potential risk from man-made hazards is from traffic. Typical customary traffic control will be installed by the developer and maintained by the Home Owners Association. These controls will feature stop signs at all intersections, caution signs on both side of the crosswalks, caution signs adjacent to the bridge, and a speed limit sign when entering the subdivision

Fire Protection Plan

Fire is major hazard within developed and non-developed areas. Natural and human triggered fires can occur without notice and spread rapidly. A fire protection plan and wildlands/wildfire interface plan can greatly reduce the destruction of property by containing fires that occur within a subdivision and prevent fires on the outskirts of a subdivision from entering the property. A copy of the fire protection plan and wildlands/wildfire interface plan is included in Appendix E.

Hazards

Forest fires are of low risk within the proposed Stone Ridge Views Subdivision due to the sparse tree coverage onsite. Sage and grass fires are a potential risk; however this risk can be managed though fuel management and good stewardship of the land. With development comes human activity and the risk of human triggered fires. However, development can also mitigate the spread of fires by providing draft hydrants, roads acting as fire breaks, mowing, irrigating vegetation and green space buffers.

Access

All lots will have access to the standard roads proposed within the boundaries of the subdivision. Interior subdivision roads widths will be either 26 or 22 feet depending upon the number of home sites on the road. Roads with access to 5 sites or more will be 26 feet wide all other roads will be 22 feet wide. These roads are acceptable to Madison County Emergency Management (MCEM). This organization has requested a 14 foot wide 30 ton bridge be installed over South Meadow Creek. However MCEM prefers a 16' wide bridge, and this is the width of the proposed bridge.

Water Availability

Currently there are no fire hydrants in the area of the subdivision which could provide an adequate water source for effectively fighting fire. As requested by Fire Chief Christensen, Madison Valley Rural Fire Department, a 10,000 gallon fire fill site will be centrally located within the subdivision at the intersection of Stone Ridge Road and Meadow Vista Drive.

Open Space Fuel Management Plan

The majority of the property is covered with sage brush. The balance of the property has a few shrubs scattered about and dense woody riparian vegetation along the creek corridor. A hayfield lies between the creek and the sage brush. The hayfield can be mowed if a high fire danger exists. Green buffer strips will be required around homesites. Stone Ridge View Drive will act as a fire break dividing the subdivision into a northern and southern part of the property and minimize fire expansion and property destruction.

1. The existing hay field and sage brush will be monitored during the dry summer months, and will be mowed or cut as required. Any dead branches from existing or planted brush or shrubs will be collected and disposed of during or prior to these dry periods. A fire break will be maintained around the perimeter of the subdivision. This fire break will be a mowed strip of land at least 20 feet wide. This fire break will be maintained at all times to prevent fires from entering or leaving the property. Grass in this break should not exceed 6" in length.
2. A 20 foot defensible space will be maintained around all buildings to prevent any possible wildfires from endangering the buildings. This area will be either gravel surfaced, paved, or green lawn. Lawns will be watered automatically with grass not to exceed 6" in length.

See additional fire protection requirements outlined in the Stone Ridge Views Wildlands/ Wildfires Interface plan (See Stone Ridge Views Home Owners Association guide and Design Guidelines Appendix E)

Hazards within the Subdivision

Hazards within the Stone Ridge Views Subdivision are few and of minimal risk. There are several irrigations ditches and a bridge within the subdivision. All of these features are potentially a risk to unsupervised children. These ditches have the potential of risk of damaging property if misused. These irrigation ditches have previously been used for flood irrigation. Flood irrigation is shallow sheet flow runoff. Shallow depth will not be a public safety hazard, but could be a hazard to property.

The bridge will be posted with a weight limit and have appropriate reflective caution signage posted on and prior to the bridge. This bridge will also be equipped with a guard rail. Road slopes entering and exiting the bridge will be minimal to reduce the danger of crossing the bridge during inclement weather conditions.

EFFECT ON COUNTY RESOURCES

County Mineral Resources

The subdivision will not have any effect on mineral resources in the county.

Impact to Outdoor Recreation, Tourism, Scenic, Culture and Historic Resources

The proposed subdivision will most likely add to the population of the county. The additional persons will have a negligible effect on outdoor recreation. Considering the diversity of outdoor recreational activities available in Madison County and the small population increase spread over the many activities, the added population will not result in a noticeable increase in use of current trails, roads, rivers, and lakes.

Tourism

Stone Ridge Views Subdivision will not be a tourist destination. It may attract some part-time residents that may or may not be considered tourist. The subdivision will not cater to part-time residents and will not be marketed as a “vacation subdivision”. The subdivision will have a trail network within its boundaries. This network is intended of recreational use by residents of the subdivision not to attract tourists to use the private trails.

Scenic

Undoubtedly the development of the subdivision will affect the scenic nature of the Elk Hills. The landscape of these hills is currently spotted with homes and this development will increase the available home building sites in this area. To reduce the visual impact on the area, home sites will be clustered around cul-de-sacs. The proposed building envelopes are not located on ridgelines within the subdivision. This practice will preserve much of adjacent property owner’s views. Homes will be finished with natural exterior colors to blend into the existing landscape (see Convents, Appendix F).

Cultural and Historic Resources

An inventory of the grounds of the proposed subdivision has been conducted by Tom Roll a professor in the Dept. Sociology & Anthropology at Montana State University. Mr. Roll’s findings are located in Appendix L.

Public ownership of Land

Deeds do not show that this land was ever publicly owned and then purchased or traded from a public land management agency.

Overall Long Term Impact on Resources

The overall long term impact of the subdivision will be minimal on county resources. The additional traffic on South Meadow Creek Road may deteriorate the gravel road more rapidly. However the road repairs will be paid for with the additional county tax revenue provided by the subdivision. A few additional seats in the classrooms may be required. Although emergency services have all stated that they have the ability to protect the subdivision and its residents, the Sheriffs office has acknowledged that the county is growing steadily and they will eventually need to expand their operation. The cumulative effect of all of the subdivisions within the County is the inevitable expansion of resources. With present economic conditions and the pace of land development in the foreseeable future the cumulative effects on the county should be moderate.

ECONOMIC EFFECT OF PROPOSED SUBDIVISION ON THE COUNTY

Strengthening the Local Economy

The Madison County is a very diverse economy making up an annual payroll of \$46,673,000 (2007). The major sectors of the economy include mining, construction, retail, finance/insurance, real estate, professional/scientific/technical, health care and food services (2007 County Business Patterns (NAICS), US Census). Construction makes up nearly 30% of the economy and for this sector of the economy to stay strong additional residential lots will be required.

The effect of the subdivision on the economy will primarily be in the construction sector. Construction of roads, trails, a bridge and fire fill site will be an upfront economic stimulus to the local economy. Residential construction will lag slightly behind, but should provide many jobs for local contractors and increase products purchased within the local region over an extended period. Future residents of this subdivision will support all of the major sectors of the local economy.

Diversifying the Economy

The subdivision itself will not diversify the local economy; however the residents of the subdivision may diversify the economy. Residents of the subdivision can bring new ideas and skills to the community. They may start up new companies in untouched sectors of the economy. The presence of the new residences in this subdivision and others may provide enough economic demand for local businesses to diversify and expand current businesses. The topography, size and location of the proposed subdivision will limit the use of the land, but ability of residents to diversify the local economy will not be limited.

The property is surrounded by residential and agricultural land and should remain as residential or agricultural land. The residential subdivision will be a better use of the land than farming and ranching. Nelson sold the land to Sam Scott, Developer, in part because the operation and maintenance cost of ranching on the land was high relative to the return from the land. The rocky undulating soil makes this land minimally productive for farming and ranching.

Protecting Resources of Major Economic Sectors

The building industry is a major sector for Madison County's Economy. This subdivision will provide attractive home sites to be built upon. As previously mentioned the land is not very productive for agricultural use and could be better used as a residential subdivision.

Another large economic sector of the County's economy is hunting, fishing and tourism. A great deal of concern has been directed towards protecting the land and wildlife. Road locations were established to minimize the slopes to reduce erosion during and post construction. Home sites have been clustered to preserve the continuity of open land from

lot to lot. South Meadow Creek has been protected with a conservation easement which is greater than 5 acres in area. Elk migration patterns have been protected on the northern portion of the property with 36 acres of this land to be placed in a conservation easement. This easement will ensure the elk can travel through the land unrestricted for eternity.

Economic Viability of the Family Farm

The subdivision will not affect the economic viability of the family farm in a positive nor negative way. Some agricultural production will be lost by the creation of this subdivision, but the creation of the proposed 18 lots will give home owners a chance to cultivate their own crops if desired on their land.

Promotion of New Business and Industry and Financial Effect on Public Services

The lagging building industry will surely get a boost by the creation of this subdivision. A significant amount of earthwork will be needed during road construction in the subdivision. Imported materials will be purchased from local quarries. This work could be contracted with companies within the county. After the creation of the roads, housing construction can begin. The construction of homes, wastewater treatment systems, earthwork, and wells will equate to millions of dollars placed in the hands of taxable local businesses.

The financial effect on public services is significant, but the additional tax revenue from the change in use of the land should offset the additional cost created by the proposed residential lots. All emergency services have acknowledged they will be able to provide fire protection, law enforcement, safety and medical emergency response in their current operational capacity. No additional staff or resources will be required.

Expansion of Year Round Employment

The subdivision will help expand the opportunities for year round employment. Residential construction can occur year round. Although some aspects of construction such as landscaping, pouring foundations and framing is more easily conducted in the spring, summer and fall, construction can continue year round on homes with a timely construction schedule.

Lands Contribution to Local Economy

Converting this mildly productive, inefficient agricultural land to residential is a good economic decision. Developing the rocky hill in an environmentally considerate manner may curb future development of the fertile valley below by providing housing in the less productive land which may otherwise occur in the more fertile areas.

Overall Economic Effect

The overall economic effect of the Stone Ridge View Subdivision will be a larger economy in Madison County. In the short term, the subdivision will be a strong contribution to the construction industry. In the long term, the subdivision will provide a larger tax base for Madison County to expand their current county services, improve infrastructure, and

improve emergency services. The full time and part-time residents of the subdivision will provide additional revenue for businesses in the greater McAllister and Ennis area.

EFFECT OF PROPOSED SUBDIVISION ON PUBLIC SERVICES PROVIDED BY OTHER ENTITIES IN COUNTY

Subdivision's Effect on Cost of other Entities

The subdivision should not have any effect on cost for road maintenance districts. The roads accessed by the subdivision are all public roads that do not lie within an existing road maintenance district. The cost to maintaining S. Meadow Creek Road is shared by the entire County and not one specific home owners association. The cost of maintenance of all interior proposed subdivision roads will be the responsibility of the Stone Ridge Views Subdivision Homeowners Association.

Impacts on Services Provided by other Entities

Private utilities should not be affected by servicing the proposed subdivision. Providing electricity and communicate services to 18 homes is minimal. Consumption of power and use of phones will be an insignificant increase and will be easily handled by Northwestern Energy and Qwest Communications.